February 2020

The 2019-2020 North Carolina Survey of Automatic Traffic Enforcement Systems

Final Report

Prepared for

NC Governor's Highway Safety Program
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ITRE

INTRODUCTION

According to Federal Regulations and beginning in 2018, every state's highway safety program that is funded in part by Section 402 grants must conduct a biennial survey of automated enforcement systems within the state (*1*). Under these regulations, the term *automated traffic enforcement system* is defined as "any camera that captures an image of a vehicle for the purposes only of red light and speed enforcement." Furthermore, these systems are not to include hand held devices operated by law enforcement officers to issue citations or other enforcement actions. For example, a law enforcement officer using a hand-held radar gun to observe a speeding violation does not count as automatic enforcement.

The biennial survey report must include:

- a list of all of the automatic traffic enforcement systems within the state
- adequate response data that measures transparency, accountability, and safety attributes for each of the listed systems
- a comparison between each of the listed systems and federal guidelines outlined in "Speed Enforcement Camera Systems Operational Guidelines" (DOT HS 810 916) and "Red Light Camera Systems Operational Guidelines" (FHWA-SA-05-002)

The North Carolina Governors Highway Safety Program (GHSP) contracted with ITRE to determine the number of active automated traffic enforcement systems in the state and to conduct this required biennial survey on all currently active systems. This report lists and discusses these survey findings.

PROCESS/METHODOLOGY

There were two primary objectives in this project: (1) determine the number of operating automated traffic enforcement systems and (2) conduct the survey for currently operating sites.

Number of Operating Automated Traffic Enforcement Systems

At the start of this project, ITRE was already aware of four operating red light camera systems in the following municipalities: Raleigh, Fayetteville, Greenville, and Wilmington. Charlotte, Greensboro, Rocky Mount, Knightdale, Chapel Hill, Cary, and High Point all had red light cameras at some point in the past 20 years, but all of these municipalities shut down their automated enforcement systems (*2*-*9*). Table 1 provides information about past and presently operating automated enforcement systems in North Carolina.

Table 1. Automated Enforcement Systems in North Carolina

City	Red Light and/or Speed Camera	Start Year	End Year or still active
Cary	Red Light	2004	2012
Chapel Hill	Red Light	2003	2004
Charlotte	BOTH	1998	2007
Fayetteville	Red Light	2015	Active
Greensboro	Red Light	2001	2003
Greenville	Red Light	2017	Active
High Point	Red Light	unknown*	2006
Knightdale	Red Light	unknown*	2013
Raleigh	Red Light	2003	Active
Rocky Mount	Red Light	2002	2008
Wilmington	Red Light	2000	Active

**unable to determine the opening date of these programs*

While some municipalities abandoned their red light cameras due to public pressure, other cities in North Carolina discontinued their programs following a decision by the North Carolina Court of Appeals in 2005 (*2-9*). This decision set a new standard for the application of the North Carolina Constitution that the revenue collected from these systems must be used exclusively to maintain public schools, except for a maximum of 10% of the fines collected that can be used for the cost accrued to operate the system (*2*). This decision meant some of the existing contracts municipalities had with private companies were financially infeasible. The systems, which used private contractors operating the cameras for more than a 10% share of the collected fines, were shut down. Charlotte, Greensboro, High Point, and Rocky Mount shut down their automated enforcement programs as a result of this case (*2-6*). The Knightdale Police Department, which took down their cameras in 2013, recorded an increase in total crashes once the cameras were deactivated (*10*). However, the increase in crashes were only observed in eight months of before-and-after crash data and this does not consider traffic volumes (*10*). No other notable findings were reported following closure of any automated enforcement program in North Carolina.

ITRE was unable to find any current use of a camera being used for automated speed enforcement. The four North Carolina municipalities that currently use cameras for automated enforcement only use them for red light offenses. Prior to shutting down their automated enforcement programs, Charlotte operated automated speed enforcement cameras; however, the entire automated enforcement program (including red light and speed cameras) was shut down in 2007 due to the previously discussed court ruling.

The North Carolina General Assembly House Bill 287, introduced on March 8, 2017, would authorize over 20 municipalities to use red light cameras for automated enforcement, including Albemarle, Charlotte, Durham, Fayetteville, Greensboro, Greenville, High Point, Locust, Lumberton, Newton, Rocky Mount, Wilmington, Chapel Hill, Cornelius, Hope Mills,

Huntersville, Matthews, Nags Head, Pineville, Spring Lake, and the municipalities in Union County (*10*). The bill passed the first reading in the Senate, but did not pass the Committee on Rules and Operations in April 2017. The bill was reintroduced as House Bill (H105) in February 2019, where it passed the first Senate reading, but did not pass the Committee on Rules and Operations in April 2019 (*11*).

Conducting the Survey

After investigating the state of all prior and ongoing automated enforcement systems in North Carolina, ITRE contacted each city's transportation department. A team member at ITRE contacted city traffic engineers within each municipality to determine the city official that was most familiar with their red light camera system and could answer all of the questions in the required survey. The survey was distributed to these contacts and they were asked to answer all of the questions and return their responses within two weeks.

The questions on the survey were split into four sections: General, Transparency, Accountability, and Safety Attributes. A blank copy of the survey can be found in Appendix A. Many of the questions were replicated from the same federally required survey conducted by the Maryland Department of Transportation (MDOT), with three additional questions added by our team. Two of these additional questions were in the *general* section, and asked for (1) the total number of operational automated traffic enforcement cameras in use and (2) the average number of tickets issued by their system as a whole each month. The third additional question was in the *transparency* section and asked how/if the safety impact of these automated enforcement systems were made public. Overall, the questions were developed so that the same survey could be sent out to municipalities again in two years' time, as required by Federal Code.

SURVEY RESULTS

Each of the four municipalities that were contacted returned their responses to the survey. The results for each of the completed surveys are discussed in the following sections and the completed surveys are in Appendix B. The summary findings for each of the four sections are provided below.

General

In the survey, each municipality was asked to answer questions about population, the type of automated enforcement used, whether the city followed federal guidelines when implementing its system, the ownership of the system, the total number of operational sites, and the number of citations issued per month. The populations of the four cities varied from 90,000 to 469,298 persons and, as mentioned previously, all four sites only operated red light cameras. Of the four municipalities, Greenville, Raleigh, and Wilmington stated that they referred to and followed federal guidelines ("*Red Light Camera Systems Operational Guidelines*", FHWA-SA-05-002) when implementing the system.

Fayetteville, Greenville, Raleigh, and Wilmington each reported that their system is contracted or leased with a private vendor. The contact from Fayetteville stated that their vendor is compensated on a per (paid) citation basis. In Raleigh, the vendor supplies, installs, operates, and maintains the red light equipment and is paid per camera location. The City of Raleigh staff review all citations, but their vendor handles appeals, customer service, billing, and payments. Wilmington has a similar contract scenario, where their contractor is responsible for the provision and maintenance of cameras, data collection/processing, mailing, and customer service. Wilmington further elaborated and stated that only the city is allowed to make the determination on whether a citation is issued or not. Additionally, the city coordinates with the state in reviewing and approving relocation of camera equipment as collision patterns change over time.

Table 2 below shows the reported values for the total number of red light cameras in use and the average number of tickets issued by each of the four cities' automated enforcement systems. All four of the responding cities have a similar number of operational cameras. Raleigh has 14 operating red light cameras, but plans to expand to 25 locations by the end of 2020. The responding cities recorded an average number of citations issued per month between 2,000 and 3,800.

Table 2. Responses for number of operation sites and tickets per month

	Fayetteville	Raleigh	Wilmington	Greenville
Population	210,000	469,298	119,000	90,000
Referred to and followed FHWA guidelines	NO	YES	YES	YES
Total number of operational red light cameras	14	14	13	10
Average number of tickets issued per month	2,000	3,800	2,250	60 – 200 per site

Transparency

In this section, city officials answered a series of six questions, provided below.

1. Are the placement locations of the automated enforcement publicly available?
2. Is information regarding the revenue of the automated enforcement publicly available?
3. Is information regarding the disbursement of this revenue publicly available?
4. Is the number of automated enforcement citations issued publicly available?
5. Is the safety impact of these automated enforcement systems publicly available?
6. Upon deployment at a specific location, is there a warning period before citations start being issued?

If the recorded response was yes for any of the first five questions, city officials were asked how that information was made publicly available.

Raleigh, Fayetteville, Greenville, and Wilmington all responded yes to each one of these questions. The placement locations were all made publicly available online at each city's respective websites. Information regarding each city's automated enforcement system's revenue, disbursement, number of citations issued, and safety impact are made available upon request from the city's transportation department.

Accountability

The third section of the survey asked city officials whether citations were reviewed by a sworn law enforcement officer and whether there was a system in place for ticket disputes. Greenville is the only city that has a sworn law enforcement officer review and sign the citations. However, each one of the four cities does have a system in place for a citation to be disputed and resolved.

In addition, city officials were asked how often their automated traffic enforcement systems were audited. All four of the cities said they audit their systems, but they do it at different intervals. Fayetteville audits their system monthly, but only because that is when their staff processes their billing; their system has never been formally audited. Raleigh conducts an internal audit on a regular cycle with annual follow-ups regarding procedure modifications recommended in the audit. Wilmington stated that their system is audited when determined by the City Auditor.

Safety Attributes

The fourth and final section of the survey asked municipalities to answer questions on whether they used engineering and crash data to determine the placement of automated enforcement systems and whether the municipality analyzed traffic data (crash, speed, etc.) to determine the impact of its automated traffic enforcement system on crash occurrence.

Each one of the four cities said they use engineering and crash data to determine the placement of their enforcement systems. Likewise, each city's response stated that they analyze crash and speed data to determine the impact their automated enforcement system has on the site.

The City of Fayetteville determined that, overall, crashes were the same after the red light cameras were installed. City officials noted that the community in Fayetteville is largely transient, due to the military population, and suspect that may be a reason for a lack of crash rate reduction. Additionally, they found that less than ten percent of violators receive a second citation.

Raleigh reported that they perform an annual update to crash diagrams at each red light location. Since 2003, a third party reviewer completed two reviews of the program.

SUMMARY

Beginning in 2018, every state that receives highway funding via section 402 grants must complete a biennial survey of all of the automated traffic enforcement systems operating within the state. This survey must record various transparency, accountability, and safety aspects of

each operating system. The NC Governor's Highway Safety Program contracted with ITRE to conduct this survey.

ITRE conducted this project in two main steps: (1) determine the number of active automated enforcement systems and (2) create and conduct the survey. It was determined that the only operating automated enforcement systems in North Carolina are in Fayetteville, Raleigh, Wilmington, and Greenville; all of which are red light systems. There had been as many as six other automated enforcement systems (in Cary, Charlotte, Greensboro, High Point, Knightdale, and Rocky Mount), but these programs were discontinued due to public pressure or a decision by the North Carolina Court of Appeals in 2005 (*2-9*).

ITRE created the survey and sent it to traffic engineers working in each of the four cities with red light cameras. The automated enforcement systems in all four cities are owned and operated by private contractors. Additionally, Fayetteville is the only city that did not consult federal guidelines when designing and implementing the program. The average number of citations issued per month for each of these programs varied from 2,000 to 3,800. The transparency section of the survey showed that all four of the cities make information on the program publicly available. Many aspects of the program can be found on the cities' websites, in public meetings, or via information requests. The accountability section showed that Greenville is the only city which as a sworn law enforcement officer review each citation, but they all had a formal system in place for citation disputes. Each responding city also audits their system, but on different intervals. Finally, the safety attributes section showed that each of the responding cities has reviewed crash and engineering data to determine both the placement of cameras and determine the impact the program has on safety.

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Appendix A. Survey Instrument.

We are administrating a questionnaire on behalf of the National Highway Traffic Safety Administration (NHTSA) that requires each state to conduct a biennial survey of all automated traffic enforcement systems. It is required that the State publicly provide data that measures the transparency, accountability, and safety attributed of each automated traffic enforcement system (23 U.S. Code § 402 and 23 CFR 1300.13). Compliance in the survey is required in order for the State's Highway Safety Program to received Federal Grant funding.

The following survey consists of 4 sections and should provide the necessary data needed to meet the transparency, accountability, and safety attributes requirements. This is a relatively short survey, and should take no longer than 15–20 minutes to complete. Please have this survey returned within 2 weeks of receiving it. Thank you for your help and cooperation.

General

1. Name of Jurisdiction: _____
2. Type of Government Entity (City, County, State, etc.): _____
3. Population: _____
4. Type of automated enforcement system used (mark appropriate box):
   Red Light Camera ☐ Speed Enforcement Camera ☐ Both ☐ Other ☐
   If Other, please list: _____
5. Did the jurisdiction refer to and follow Federal DOT "*Speed Enforcement Camera Systems Operational Guidelines"* when implementing its automated enforcement systems?
   Yes ☐ No ☐ Not Applicable (no automated speed cameras) ☐
6. Did the jurisdiction refer to and follow Federal DOT "*Red Light Camera Systems Operational Guidelines"* when implementing its automated enforcement systems?
   Yes ☐ No ☐ Not Applicable (no automated red light cameras) ☐
7. Opening date of the automatic enforcement system:_____
8. Has the total number and locations of sites changed over time?
   Yes ☐ No ☐
   If yes, how so:

9. Ownership of the system (camera and other equipment):
   Jurisdiction owned ☐ Contracted/leased ☐ Other ☐
   Please describe the contract agreement your municipality has in place:

10. Total number of operational automated enforcement systems in use:
    Red Light Cameras: _____
    Speed Enforcement Cameras: _____
    Other: _____
11. On average, how many tickets are issued per month for each site type?
    Red Light Cameras: _____
    Speed Enforcement Cameras: _____
    Other: _____
12. Please quickly elaborate on how sites are chosen for automatic enforcement. (Crash frequency, crash rate, number of citations issued, facility geometry, political pressure, etc.):

Transparency

1. Are the placement locations of the automated enforcement publicly available?
   Yes☐ No☐
   If yes, how is it publicly available (online, public meetings, etc.):

2. Is information regarding the revenue of the automated enforcement publicly available?
   Yes☐ No☐
   If yes, how is it publicly available (online, public meetings, etc.):

3. Is information regarding the disbursement of this revenue publicly available?
   Yes☐ No☐
   If yes, how is it publicly available (online, public meetings, etc.):

4. Is the number of automated enforcement citations issued publicly available?
   Yes☐ No☐
   If yes, how is it publicly available (online, public meetings, etc.):

5. Is the safety impact of these automated enforcement systems publicly available?
   Yes☐ No☐
   If yes, how is it publicly available (online, public meetings, etc.):

6. Upon deployment at a specific location, is there a warning period before citations start being issued?
   Yes☐ No☐

Accountability

1. Are citations reviewed and signed by a sworn law enforcement officer?
   Yes☐ No☐
2. Is there a system in place for dispute resolution?
   Yes☐ No☐
3. Is the automated enforcement program audited?
   Yes☐ No☐
   If yes, how often? _____

Safety Attributes

1. Is traffic data (engineering and crash) utilized to determine the placement of automated enforcement systems?
   Yes ☐ No ☐
2. Does the jurisdiction analyze traffic data to determine its automated traffic enforcement's impact on safety (crashes, speed, etc.)?
   Yes ☐ No ☐
   If yes, please share the findings of the automated traffic enforcement's impact by attaching files to this survey or discussing below:

Data recorded by: _____ _____
Name Date

_____
Title within organization/municipality

Appendix B. Completed Municipal Surveys

NHTSA NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

ITRE Institute for Transportation Research and Education

We are administrating a questionnaire on behalf of the National Highway Traffic Safety Administration (NHTSA) that requires each state to conduct a biennial survey of all automated traffic enforcement systems. It is required that the State publicly provide data that measures the transparency, accountability, and safety of each automated traffic enforcement system (23 U.S. Code § 402 and 23 CFR 1300.13). Compliance in the survey is required in order for the State's Highway Safety Program to receive Federal Grant funding.

The following survey consists of 4 sections and should provide the necessary data needed to meet the transparency, accountability, and safety attributes requirements. This is a relatively short survey, and should take no longer than 15–20 minutes to complete. Please have this survey returned within 2 weeks of receiving it. Thank you for your help and cooperation.

General

1. Name of Jurisdiction: City of Fayetteville
2. Type of Government Entity (City, County, State, etc.): City
3. Population: 210K
4. Type of automated enforcement system used (mark appropriate box):
   Red Light Camera ☒ Speed Enforcement Camera ☐ Both ☐ Other ☐
   If Other, please list: _____
5. Did the jurisdiction refer to and follow Federal DOT "*Speed Enforcement Camera Systems Operational Guidelines*" when implementing its automated enforcement systems?
   Yes ☐ No ☐ Not Applicable (no automated speed cameras) ☒
6. Did the jurisdiction refer to and follow Federal DOT "*Red Light Camera Systems Operational Guidelines*" when implementing its automated enforcement systems?
   Yes ☐ No ☒ Not Applicable (no automated red light cameras) ☐
7. Opening date of the automatic enforcement system: July 2015
8. Has the total number and locations of sites changed over time?
   Yes ☒ No ☐
   If yes, how so:
   4 cameras operational July 1, 2015, 6 additional October 2015
   5 additional August 2017, Total 15. 1 camera has since been removed for a current total of 14.
9. Ownership of the system (camera and other equipment):
   Jurisdiction owned ☐ Contracted/leased ☒ Other ☐
   Please describe the contract agreement your municipality has in place:
   5 year agreement paid on a per paid citation basis to vendor. Term scheduled to expire 2022.
10. Total number of operational automated enforcement systems in use:
    Red Light Cameras: 14
    Speed Enforcement Cameras: 0
    Other: 0
11. On average, how many tickets are issued per month for each site type?
    Red Light Cameras: 2000
    Speed Enforcement Cameras: 0
    Other: 0
12. Please quickly elaborate on how sites are chosen for automatic enforcement. (Crash frequency, crash rate, number of citations issued, facility geometry, political pressure, etc.):
    sites were evaluated by a committee of stakeholders including, NCDOT, Vendor, City Traffic Services, County School System, Police. High accident locations were reviewed, geometry of intersection, constructibility were considered. Predictive model provided by vendor also used. sites were reviewed by team and final locations determined.

NHTSA NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

ITRE Institute for Transportation Research and Education

Transparency

1. Are the placement locations of the automated enforcement publically available?
   Yes☒ No☐
   If yes, how is it publically available (online, public meetings, etc.):
   Public outreach was conducted prior to installation using media, social media, public meetings and is maintained on our website.
2. Is information regarding the revenue of the automated enforcement publically available?
   Yes☒ No☐
   If yes, how is it publically available (online, public meetings, etc.):
   Available upon public records request
3. Is information regarding the disbursement of this revenue publically available?
   Yes☒ No☐
   If yes, how is it publically available (online, public meetings, etc.):
   Available upon public records request
4. Is the number of automated enforcement citations issued publically available?
   Yes☒ No☐
   If yes, how is it publically available (online, public meetings, etc.):
   Available upon public records request.
5. Is the safety impact of these automated enforcement systems publically available?
   Yes☒ No☐
   If yes, how is it publically available (online, public meetings, etc.):
   Unsure of specific data being referred to, but any info we have pertaining to the program is available
6. Upon deployment at a specific location, is there a warning period before citations start being issued?
   Yes☒ No☐
   30 day warning was used.

Accountability

1. Are citations reviewed and signed by a sworn law enforcement officer?
   Yes☐ No☒
2. Is there a system in place for dispute resolution?
   Yes☒ No☐
3. Is the automated enforcement program audited?
   Yes☒ No☐
   If yes, how often? monthly by staff reviewing citations issued in accordance with the business rules of the program.

NHTSA NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

ITRE Institute for Transportation Research and Education

Safety Attributes

1. Is traffic data (engineering and crash) utilized to determine the placement of automated enforcement systems?
   Yes ☒ No ☐
2. Does the jurisdiction analyze traffic data to determine its automated traffic enforcement's impact on safety (crashes, speed, etc.)?
   Yes ☒ No ☐
   If yes, please share the findings of the automated traffic enforcement's impact by attaching files to this survey or discussing below:

Crash data was reviewed in the first months of the program. This data revealed crashes were marginally the same before and after. One measure of success we review is the repeat offender rate which exceeds 90%, meaning less than 10% of violators receive a 2nd citation. Due to the ongoing transient nature of our community, based on our large military population, we continue to educate our motorists about this issue which in our belief is why we don't see the reduction in crashes realized in other communities.

Data recorded by: Lee Jernigan
Name

12.9.19
Date

City Traffic Engineer
Title within organization/municipality

NHTSA
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

ITRE
Institute for Transportation Research and Education

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The following survey consists of 4 sections and should provide the necessary data needed to meet the transparency, accountability, and safety attributes requirements. This is a relatively short survey, and should take no longer than 15–20 minutes to complete. Please have this survey returned within 2 weeks of receiving it. Thank you for your help and cooperation.

General

1. Name of Jurisdiction: GREENVILLE NC.
2. Type of Government Entity (City, County, State, etc.): CITY
3. Population: 90,000
4. Type of automated enforcement system used (mark appropriate box):
   Red Light Camera ☒ Speed Enforcement Camera ☐ Both ☐ Other ☐
   If Other, please list: _____
5. Did the jurisdiction refer to and follow Federal DOT "*Speed Enforcement Camera Systems Operational Guidelines*" when implementing its automated enforcement systems?
   Yes ☒ No ☐ Not Applicable (no automated speed cameras) ☐
6. Did the jurisdiction refer to and follow Federal DOT "*Red Light Camera Systems Operational Guidelines*" when implementing its automated enforcement systems?
   Yes ☒ No ☐ Not Applicable (no automated red light cameras) ☐
7. Opening date of the automatic enforcement system: NOVEMBER 15, 2017
8. Has the total number and locations of sites changed over time?
   Yes ☐ No ☒
   If yes, how so?

9. Ownership of the system (camera and other equipment):
   Jurisdiction owned ☐ Contracted/leased ☒ Other ☐
   Please describe the contract agreement your municipality has in place:

10. Total number of operational automated enforcement systems in use:
    Red Light Cameras: 10 CAMERAS @ 5 INTERSECTIONS
    Speed Enforcement Cameras: —
    Other: —
11. On average, how many tickets are issued per month for each site type?
    Red Light Cameras: 60 – 200, DEPENDENT ON LOCATION
    Speed Enforcement Cameras: —
    Other: —
12. Please quickly elaborate on how sites are chosen for automatic enforcement. (Crash frequency, crash rate, number of citations issued, facility geometry, political pressure, etc.):

- CRASH FREQUENCY
- CRASH RATE
- CITATIONS ISSUED
- FACILITY GEOMETRY

Transparency

1. Are the placement locations of the automated enforcement publically available?
   Yes ☒ No ☐
   If yes, how is it publically available (online, public meetings, etc.):
   - PUBLIC ANNOUNCEMENTS / MEDIA
   - LOCATIONS ARE SIGNED
2. Is information regarding the revenue of the automated enforcement publically available?
   Yes ☒ No ☐
   If yes, how is it publically available (online, public meetings, etc.):
   - PUBLIC ANNOUNCEMENTS / MEDIA
3. Is information regarding the disbursement of this revenue publically available?
   Yes ☒ No ☐
   If yes, how is it publically available (online, public meetings, etc.):
   - PUBLIC ANNOUNCEMENTS / MEDIA
4. Is the number of automated enforcement citations issued publically available?
   Yes ☒ No ☐
   If yes, how is it publically available (online, public meetings, etc.):
   THROUGH REQUEST
5. Is the safety impact of these automated enforcement systems publically available?
   Yes ☒ No ☐
   If yes, how is it publically available (online, public meetings, etc.):
   FOLLOW UP STUDIES / PA / MEDIA
6. Upon deployment at a specific location, is there a warning period before citations start being issued?
   Yes ☒ No ☐

Accountability

1. Are citations reviewed and signed by a sworn law enforcement officer?
   Yes ☒ No ☐
2. Is there a system in place for dispute resolution?
   Yes ☒ No ☐
3. Is the automated enforcement program audited?
   Yes ☒ No ☐
   If yes, how often? _____

Safety Attributes

1. Is traffic data (engineering and crash) utilized to determine the placement of automated enforcement systems?
   Yes ☒ No ☐
2. Does the jurisdiction analyze traffic data to determine its automated traffic enforcement's impact on safety (crashes, speed, etc.)?
   Yes ☒ No ☐
   If yes, please share the findings of the automated traffic enforcement's impact by attaching files to this survey or discussing below:

FOLLOW UP STUDIES &
BEFORE / AFTER COMPARISONS *
* CRASHES & CITATIONS

Data recorded by: RICHARD DiCESARE (Name) 12/16/19 (Date)

CITY TRAFFIC ENGINEER
Title within organization/municipality

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The following survey consists of 4 sections and should provide the necessary data needed to meet the transparency, accountability, and safety attributes requirements. This is a relatively short survey, and should take no longer than 15–20 minutes to complete. Please have this survey returned within 2 weeks of receiving it. Thank you for your help and cooperation.

General

1. Name of Jurisdiction: City of Raleigh
2. Type of Government Entity (City, County, State, etc.): City
3. Population: 2018 - 469,298 (est US Census Bureau)
4. Type of automated enforcement system used (mark appropriate box):
   Red Light Camera ☑ Speed Enforcement Camera ☐ Both ☐ Other ☐
   If Other, please list: _____
5. Did the jurisdiction refer to and follow Federal DOT "*Speed Enforcement Camera Systems Operational Guidelines"* when implementing its automated enforcement systems?
   Yes ☐ No ☐ Not Applicable (no automated speed cameras) ☑
6. Did the jurisdiction refer to and follow Federal DOT "*Red Light Camera Systems Operational Guidelines"* when implementing its automated enforcement systems?
   Yes ☑ No ☐ Not Applicable (no automated red light cameras) ☐
7. Opening date of the automatic enforcement system: 2003
8. Has the total number and locations of sites changed over time?
   Yes ☑ No ☐
   If yes, how so:
   15 sites and currently expanding to 25 sites

9. Ownership of the system (camera and other equipment):
   Jurisdiction owned ☐ Contracted/leased ☑ Other ☐ Vendor paid per camera location actively issuing citations and not per approved citation.
   Please describe the contract agreement your municipality has in place:
   Contract requires Vendor to supply, install, operate, and maintain all red light equipment. City staff are the last line of citation review before determining if a violation has occured. Vendor handles appeals, customer service, billing and credit card payments by phone and web (City handles all other payments)
10. Total number of operational automated enforcement systems in use:
    Red Light Cameras: Currently 14 locations - development of ultimate 25 locations by end of 2020
    Speed Enforcement Cameras: n/a
    Other: n/a
11. On average, how many tickets are issued per month for each site type?
    Red Light Cameras: ~3800 per month
    Speed Enforcement Cameras: n/a
    Other: n/a
12. Please quickly elaborate on how sites are chosen for automatic enforcement. (Crash frequency, crash rate, number of citations issued, facility geometry, political pressure, etc.):
    Third party review of city-wide intersections - a list of "Intersections with promise" was developed by reviewing specific red light running crash data. Data pulled by NCDOT Safety staff through their TEAAS program - filtered to pull out red light running locations and approach direction of vehicle in violation of running the red light. The list provided was ranked and City staff reviewed each location for constructibility and equitable split between City Council Voting Districts.

Transparency

1. Are the placement locations of the automated enforcement publically available?
   Yes ☑ No ☐
   If yes, how is it publically available (online, public meetings, etc.):
   Online

2. Is information regarding the revenue of the automated enforcement publically available?
   Yes ☑ No ☐
   If yes, how is it publically available (online, public meetings, etc.):
   Technically every thing we do is available to the public - this information is currently only provided through a citizen's initiation of a Public Records Request

3. Is information regarding the disbursement of this revenue publically available?
   Yes ☑ No ☐
   If yes, how is it publically available (online, public meetings, etc.):
   Same as above

4. Is the number of automated enforcement citations issued publically available?
   Yes ☑ No ☐
   If yes, how is it publically available (online, public meetings, etc.):
   Same as above

5. Is the safety impact of these automated enforcement systems publically available?
   Yes ☑ No ☐
   If yes, how is it publically available (online, public meetings, etc.):
   Same as above

6. Upon deployment at a specific location, is there a warning period before citations start being issued?
   Yes ☑ No ☐
   No "Warning" tickets are issued during this time but the infrastructure and signage are in place for a time period before the Camera becomes active

Accountability

1. Are citations reviewed and signed by a sworn law enforcement officer?
   Yes ☐ No ☑
2. Is there a system in place for dispute resolution?
   Yes ☑ No ☐
3. Is the automated enforcement program audited?
   Yes ☑ No ☐
   If yes, how often? internal audit on a regular cycle - last audit 2016 with annual follow-ups regarding procedure modifications recommended in audit

Safety Attributes

1. Is traffic data (engineering and crash) utilized to determine the placement of automated enforcement systems?
   Yes ☑ No ☐
2. Does the jurisdiction analyze traffic data to determine its automated traffic enforcement's impact on safety (crashes, speed, etc.)?
   Yes ☑ No ☐
   If yes, please share the findings of the automated traffic enforcement's impact by attaching files to this survey or discussing below:

   An annual update to the Crash Diagrams is performed for each location. Since 2003, two reviews of the program performance were completed by a third party reviewer. The last occurring in 2013. Based on the documented reduction of angle crashes identified in the past review of the program, The last review in 2018 concentrated on site selection over performance of current program.

Data recorded by: Todd Edwards _____ 1/21/2020 _____
Name Date

City Traffic Safety Engineer _____
Title within organization/municipality

We are administrating a questionnaire on behalf of the National Highway Traffic Safety Administration (NHTSA) that requires each state to conduct a biennial survey of all automated traffic enforcement systems. It is required that the State publicly provide data that measures the transparency, accountability, and safety attributed of each automated traffic enforcement system (23 U.S. Code § 402 and 23 CFR 1300.13). Compliance in the survey is required in order for the State's Highway Safety Program to received Federal Grant funding.

The following survey consists of 4 sections and should provide the necessary data needed to meet the transparency, accountability, and safety attributes requirements. This is a relatively short survey, and should take no longer than 15–20 minutes to complete. Please have this survey returned within 2 weeks of receiving it. Thank you for your help and cooperation.

General

1. Name of Jurisdiction: _City of Wilmington, NC_____
2. Type of Government Entity (City, County, State, etc.): __City_____
3. Population: __119k_____
4. Type of automated enforcement system used (mark appropriate box):
   Red Light Camera ■ Speed Enforcement Camera ☐ Both ☐ Other ☐
   If Other, please list: _____
5. Did the jurisdiction refer to and follow Federal DOT "*Speed Enforcement Camera Systems Operational Guidelines*" when implementing its automated enforcement systems?
   Yes ☐ No ☐ Not Applicable (no automated speed cameras) ■
6. Did the jurisdiction refer to and follow Federal DOT "*Red Light Camera Systems Operational Guidelines*" when implementing its automated enforcement systems?
   Yes ■ No ☐ Not Applicable (no automated red light cameras) ☐
7. Opening date of the automatic enforcement system:___2000_____
8. Has the total number and locations of sites changed over time?
   Yes ■ No ☐
   If yes, how so:
   Original deployment was 15 cameras, over time, system has contracted to 13 sites.

9. Ownership of the system (camera and other equipment):
   Jurisdiction owned ☐ Contracted/leased ■ Other ☐
   Please describe the contract agreement your municipality has in place:
   Contract requires the contractor to provide, operate and maintain all camera equipment. Requires that the contractor process images, pull registration information and present to the City for determination on whether a citation is issued. From that point forward, the contractor provides mailing, and customer service including payment and appeal request processing. City coordinates with State in reviewing and approving relocation of camera equipment as collision patterns trend over time.
10. Total number of operational automated enforcement systems in use:
    Red Light Cameras: _13____
    Speed Enforcement Cameras: _____
    Other: _____
11. On average, how many tickets are issued per month for each site type?
    Red Light Cameras: __2250/month systemwide, 173 +/- per site _____
    Speed Enforcement Cameras: _____
    Other: _____
12. Please quickly elaborate on how sites are chosen for automatic enforcement. (Crash frequency, crash rate, number of citations issued, facility geometry, political pressure, etc.):
    Site crash data was pulled for five years history. Specific examination of angle type collisions and

left turn same road collisions (where permitted left turns are allowed). The last site was a relocation. Site was chosen as it was considered as part of an NCDOT road safety audit. Relocation was considered at another location, however, no distinct collision pattern was identified indicating a specific approach was identified to have the most prevalent pattern of red light running

Transparency

1. Are the placement locations of the automated enforcement publically available?
   Yes ■ No ☐
   If yes, how is it publically available (online, public meetings, etc.):
   https://www.wilmingtonnc.gov/home/showdocument?id=1688

2. Is information regarding the revenue of the automated enforcement publically available?
   Yes ■ No ☐
   If yes, how is it publically available (online, public meetings, etc.):
   Generally, provided on request. Citation verbiage specifically states that 90% of the fine is remanded to the NHC School Board as required by the State constitution.

3. Is information regarding the disbursement of this revenue publically available?
   Yes ■ No ☐
   If yes, how is it publically available (online, public meetings, etc.):
   As requested

4. Is the number of automated enforcement citations issued publically available?
   Yes ■ No ☐
   If yes, how is it publically available (online, public meetings, etc.):
   As requested

5. Is the safety impact of these automated enforcement systems publically available?
   Yes ■ No ☐
   If yes, how is it publically available (online, public meetings, etc.):
   Crash data as requested, Online videos provide general information about safety benefits.

6. Upon deployment at a specific location, is there a warning period before citations start being issued?
   Yes ■ No ☐

Accountability

1. Are citations reviewed and signed by a sworn law enforcement officer?
   Yes ☐ No ■
2. Is there a system in place for dispute resolution?
   Yes ■ No ☐
3. Is the automated enforcement program audited?
   Yes ■ No ☐
   If yes, how often? __as determined by City Auditor_____

Safety Attributes

1. Is traffic data (engineering and crash) utilized to determine the placement of automated enforcement systems?
   Yes ☒ No ☐
2. Does the jurisdiction analyze traffic data to determine its automated traffic enforcement's impact on safety (crashes, speed, etc.)?
   Yes ☒ No ☐
   If yes, please share the findings of the automated traffic enforcement's impact by attaching files to this survey or discussing below:

Original before and after study completed at 3 years post initial deployment by prior program administrator. As the system has been in place for more approaching 20 years, the before data is in valid due to opening of new roadways, traffic volume growth and general traffic pattern changes. We are working on finding a valid way to quantify performance at locations to which cameras have been relocated, as well as quantifying changes at locations where cameras have been removed.

Data recorded by: Donald Bennett (Name) 11/19/19 (Date)

City Traffic Engineer/Safelight Program Administrator
Title within organization/municipality